SPECIFICATION AND FORECAST EVALUATION
OF A SETAR MODEL OF MEXICO’S GDP

I. The Presence of Nonlinearities in Economic Data
   A. Historical Citations
   B. Battery of Tests
   C. Software Available
      i. Ashley & Patterson Book and Software
      ii. NTS: University of Chicago

II. The SETAR Model
   A. Notation
   B. Methodology: Arranged Autoregression (Tsay (1989, JASA))
      i. Choice of Lag of Threshold Variable: TAR F-test
      ii. Determining Threshold Breakpoint
          a. Cusum and Cusumsq Graphs
          b. Iterative SSE Graph
      iii. Examining Possibility of Additional Breakpoints:
           Additional Cusum and Cusumsq Graphs
   C. Selection of Final Model
      i. Stationarity of Separate AR Models
      ii. Comparison of Steady-States Implied by SETAR

III. Forecasting Evaluation of SETAR Model Versus AR(2) Model
   A. Selection of In-Sample Versus Out-of-Sample Data Sets
   B. Fitting the SETAR to In-Sample Data Set
      i. Ambiguity of Breakpoint in Certain Cases
      ii. Sensitivity to Choice of Breakpoint
      iii. Sensitivity to Choice of Threshold Variable
      iv. Sensitivity to Choice of Partition of Data

IV. Conclusion and Comparison With Other Studies
   A. Properties of SETAR Model for Mexico’s GDP
   B. Comparison with U.S. GDP SETAR (Tiao and Tsay, JOF, 1994)
   C. Monte Carlo Study of Clements and Smith (JAE, 1999)
   D. Multi-step ahead Forecasts in SETAR Models
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